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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,297	06/13/2007	Aarto Paren	KMI-0003	7172

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EXAMINER	
CALANDRA, ANTHONY J	
ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/590,297	PAREN ET AL.	
	Examiner	Art Unit	
	ANTHONY J. CALANDRA	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18 and 20-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18 and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/04/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Office Action

The communication dated 1/4/2007 has been entered and fully considered.

Claims 1, 2, 5, 7-12, 15, 18, and 20 have been preliminarily amended. Claims 17 and 19 have been canceled. Claims 21 and 22 are new. Claims 1-16, 18, and 20-22 are currently pending.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-4, 7-14, 18, 20, and 21-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 8, 11-13, 16, 18, and 19 of copending Application No. 11/570452. Although the conflicting claims are not

identical, they are not patentably distinct from each other because the copending claims claim each of the limitations of the instant claims.

As for instant claims 1, 7-11, 21 and 22, the copending application claims a peroxide deinking of pulp [copending claim 1] which occurs in a pulper or bleaching step [copending claim 10]. The peroxide added during deinking will also bleach the pulp. The copending application claims a non-ionic surfactant and claims an organic stabilizer [copending claim 1]. The copending application claims that subsequent to the peroxide treatment step there is a washing or floatation step [copending claims 11 and 12].

In addition to the above as for instant claims 7, 11 and 21, the copending application claims a polymeric organic stabilizer poly-alpha-hydroxyacrylic acid [copending claim 1].

In addition to the above as for instant claims 8 and 11, the copending application claims 0.01 to 0.5% by weight of stabilizing polymers [copending claim 8].

In addition to the above as for instant claims 9, 11, and 22 the copending application claims an ethoxylated fatty alcohol [copending claim 18].

In addition to the above as for instant claims 10 and 11, the copending application claims 0.001 to 1.5% by weight surfactant with up to 90% as ethoxylated fatty alcohol [copending claims 16 and 19] which overlaps with the instant claimed range.

As for claims 2-4 and 12-14, the copending application discloses that the treatment can occur in multiple stages [copending claim 13]. Therefore when treatment occurs in two stages there is an addition after the first stage or an addition before the second stage. The addition that is added the bleaching repulping, or floatation stage occurs during treatment. Further, it is *prima facie* obvious to change the order of addition absent evidence of unexpected results.

As for claim 18, the copending application claims 0.01 to 0.5% by weight of stabilizing polymers [copending claim 8] which overlaps with the instant claimed range.

As for claim 20, the copending applications claims 0.001 to 1.5% by weight surfactant with up to 90% as ethoxylated fatty alcohol [copending claims 16 and 19] which overlaps with the instant claimed range.

This is a provisional obviousness-type double patenting rejection. Examiner notes that 11/570452 issue fee has been paid and the application is in the process of issuing. Upon issuance this rejection will no-longer be provisional.

2. Claims 5, 6, 15 and 16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 8, 11-13, 16, 18, and 19 of copending Application No. 11/570452 in view of U.S. Patent 5,234,544 NADDEO, hereinafter NADDEO.

The copending application claims all the limitations as per above. The copending application fails to claim adding surfactant to the dilution water prior to washing. The copending application is also silent as to the washer type in the claims. NADDEO discloses adding surfactant to diluted pulp prior to washing [Figure 1, column 4 lines 19-25]. At the time of the invention it would have been prima facie obvious to dilute the pulp prior to using the drum washer of NADDEO for washing. The person of ordinary skill in the art would be motivated to dilute the pulp to obtain the pulp consistency at which drum washers are fed at. It would be obvious to add surfactant to the pulp prior to washing to remove contamination and reaction

products. While NADDEO adds the surfactant separately from the dilution it would be *prima facie* obvious to change the order of addition such that the surfactant was added to the dilution water absent evidence of unexpected results.

This is a provisional obviousness-type double patenting rejection. Examiner notes that 11/570452 issue fee has been paid and the application is in the process of issuing. Upon issuance this rejection will no-longer be provisional.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 7-14, 18, 20, 21, and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European publication E.P. 0814193 A2, NISHINO et al., hereinafter NISHINO as evidenced by U.S. 5,357,636 DRESDNER et al., hereinafter DRESDNER.

As for claims 1-3, NISHINO discloses peroxide bleaching [abstract, pg. 4 line 19] of mechanical pulp [pg. 7 lines 1-5]. NISHINO discloses contacting the pulp with a stabilizer before or after treatment [pg. 3 lines pg. 4 lines 19-32]. NISHINO discloses contacting the pulp with a surfactant [pg. 6 lines 20-23, pg. 12 example 21, pg. 12 last line - pg. 13 1st line]. NISHINO discloses washing the pulp [pg. 13 lines 45-50]. NISHINO is silent on the removal of extractives from the pulp after washing. However, since all of the active process steps of the claim are anticipated by NISHINO the removing of extractives naturally follows as an inherent result which flows from the process steps or is an obvious variant thereof of the process as claimed.

As for claim 4, NISHINO discloses that the stabilizer solution can be added with the peroxide and discloses that the stabilization solution can contain surfactants, see above. NISHINO teaches that there can be more than 1 peroxide treatment stage [pg. 7 line 50]. Therefore in the case with two peroxide treatment stages with stabilizer solutions, a second peroxide treatment stage with stabilizing solution with surfactant is added after the first peroxide treatment stage, meeting plain language of the claim.

As for claims 7 and 21, NISHINO discloses poly-alpha hydroxyacrylic acid [pg. 4 line 44].

As for claim 8, NISHINO discloses a treatment of pulp with 0.2% by weight of stabilizer [pg. 14 lines 30-40]. A treatment with 0.2% by weight is equivalent to 2 kg/ton (0.002 * 1000 kg = kg of stabilizer). However, NISHINO states that this stabilizer is composed of multi-components. For example 24, NISHINO discloses using the stabilizing agent of example 1 in table 1 [table 5]. The example teaches three components with 45% of an organic stabilizing polymer SPA1. At 45% the SPA1 on pulp is equivalent to 0.9 kg/ton of pulp which falls within the instant claimed range. In the alternate, absent evidence of criticality or unexpected results it would have been prima facie obvious to optimize the concentration of stabilizers through routine experimentation to obtain the optimum amount of stabilization.

As for claim 9, NISHINO discloses an anionic surfactant [pg. 12 last line - pg. 13 1st line].

As for claim 10, NISHINO discloses that surfactant can be added to the stabilizing composition. NISHINO discloses an embodiment of adding the surfactant at half the weight

basis with the stabilizing agents (1 g/liter vs. 2 g/liter) [pg. 12 lines 49-57]. Therefore for a treatment of 2 kg/ton (see above) stabilizer there would be 1 kg/ton of pulp of surfactant.

As for claims 11-13, 18 and 20 NISHINO teaches all of the features above including, an oil in water emulsifier, alkyl sulfate [pg. 6 line 23], at a concentration of 1 kg/ton of pulp of surfactant [see calculations above]. NISHINO additionally discloses sodium acrylate polymer acting as a stabilizing agent at a concentration of 0.9 kg/ton of pulp and also a poly-alpha-hydroxyacrylic acid polymer. NISHINO discloses that the treatment can occur simultaneously with peroxide or as a pre-treatment. Subsequent to the peroxide treatment NISHINO teaches washing of the pulp. NISHINO is silent on the removal of extractives from the pulp after washing. However, since all of the active process steps of the claim are anticipated by NISHINO the removing of extractives naturally follows as an inherent result which flows from the process steps or is an obvious variant thereof of the process as claimed.

As for claim 14, NISHINO discloses that the stabilizer solution can be added with the peroxide and discloses that the stabilization solution can contain surfactants, see above. NISHINO teaches that there can be more than 1 peroxide treatment stage [pg. 7 line 50]. Therefore in the case with two peroxide treatment stages with stabilizer solutions, a second peroxide treatment stage with stabilizing solution with surfactant is added after the first peroxide treatment stage, meeting plain language of the claim.

As for claim 22, NISHINO discloses a specific surfactant alkyl sulfate [pg. 6 line 23]. An alkyl sulfate is an oil in water emulsifier as evidenced by DRESDNER [column 26 lines 49-50].

4. Claims 4-6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over European publication E.P. 0814193 A2, NISHINO et al., hereinafter NISHINO in view of Handbook for Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, or in the alternate, SMOOK in view of NISHINO.

As for claims 4-6 and 14-16, NISHINO teaches pulp bleaching, including mechanical pulps, using peroxide, a stabilizer and surfactant. NISHINO further teaches a washing step. NISHINO teaches each of these steps on a bench/lab scale but fails to disclose the equipment that would be used in an industrial scale pulp mill.

SMOOK discloses that a peroxide brightening sequence for use in bleaching in mechanical pulps [pg. 184 column 2]. In the peroxide bleaching scheme the pulp is bleached and then pressed and then bleached again [Figure 11-27]. At the time of the invention it would have been prima facie obvious to use the industrial process of SMOOK for the bleaching of NISHINO. The person of ordinary skill in the art would be motivated to do so because a two stage system provides cleaner pulp [pg. 185 column 1].

In the alternative, SMOOK teaches a bleaching system. At the time of the invention it would have been obvious to the person of ordinary skill in the art to use the bleaching additives of NISHINO in the bleaching process of SMOOK

As for claims 5 and 15, as SMOOK shows dilution recycle filtrate being added to the bottom of the peroxide tower for dilution prior to the pulp being pressed (dewatered [pg. 284 Figure 11-27]).

As for claims 4, 6, 14 and 16, as pulp of NISHINO/SMOOK is dewatered in the press, filtrate which contains surfactant is squeezed out. This press filtrate is added to the holding tank which contains dilution water which is added to bottom of the tower after peroxide bleaching.

5. Claims 5, 6, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over European publication E.P. 0814193 A2, NISHINO et al., hereinafter NISHINO in view of U.S. Patent 5,234,544 NADDEO, hereinafter NADDEO.

NISHINO teaches pulp bleaching, including mechanical pulps, using peroxide, a stabilizer and surfactant. NISHINO further teaches a washing step but is silent to the washer type. NISHINO teaches each of these steps on a bench/lab scale but fails to disclose the equipment that would be used in an industrial scale pulp mill.

NADDEO discloses adding surfactant to diluted pulp prior to washing [Figure 1, column 4 lines 19-25]. At the time of the invention it would have been obvious to substitute one known washing method/device for another known washing method/device. The results are predictable the person of ordinary skill in the art would expect the pulp to be washed. At the time of the invention it would have been prima facie obvious to dilute the pulp prior to using the drum washer of NADDEO for washing. The person of ordinary skill in the art would be motivated to dilute the pulp to obtain the pulp consistency at which drum washers are fed at. It would be obvious to add surfactant to the pulp prior to washing to remove contamination and reaction products. While NADDEO adds the surfactant separately from the dilution it would be *prima facie* obvious to change the order of addition such that the surfactant was added to the dilution water absent evidence of unexpected results.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Thursday, 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J Calandra/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791